

REMARKS

This is intended as a full and complete response to the Office Action dated May 3, 2006, having a shortened statutory period for response set to expire on August 3, 2006. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-10, 12-17, 19 and 21 remain pending in the application and are shown above. Claims 1-10, 12-17, 19 and 21 stand rejected by the Examiner. Reconsideration of the rejected claims is requested for reasons presented below.

Applicant thanks the Examiner for his time in a telephonic interview with Applicant's representative, John-Paul Cherry, on July 31, 2006. In that interview, independent claims 1, 8, 16, and 21 were discussed regarding the additional limitation of having the solid precursor applied to the surfaces contained in the housing.

Claims 1, 8, 16, and 21 have been amended to clarify the invention based on the telephonic interview. Applicant respectfully requests entry of the claims as amended, and submits the claims are in allowable form.

Claims 1, 2, 6-9, 14 and 15 are rejected under 35 U.S.C. §102(b) as being anticipated by *Suntola et al.* (US 4,389,973). Applicant respectfully traverses the rejection on grounds that the reference *Suntola et al.* does not teach or suggest the invention as claimed.

Applicant submits the reference *Suntola et al.* does not teach or suggest an apparatus for vaporizing a solid precursor, comprising a housing having an interior volume and an inlet for receiving a carrier gas, wherein the interior volume is configured to receive a solid chemical precursor, and at least two surfaces contained in the housing having the solid chemical precursor applied thereto, wherein each of the at least two surfaces comprise a heating element and are spaced to allow flow of the carrier gas therebetween, as recited in claim 1. Withdrawal of the rejection to claim 1, and claims dependent thereon, is respectfully requested.

Applicant also submits the reference *Suntola et al.* does not teach or suggest an apparatus for vaporizing a solid precursor, comprising a housing having an interior

volume, wherein the interior volume is configured to receive a solid chemical precursor, an inlet for receiving a carrier gas, an outlet for delivering the carrier gas and a vaporized solid precursor, the vaporized solid precursor originating from the solid chemical precursor, a first wall to support the inlet, at least two surfaces contained in the housing and spaced to allow passage of the carrier gas, the at least two surfaces having the solid precursor applied thereto, and a heating member contained in each of the at least two surfaces, as recited in claim 8. Withdrawal of the rejection to claim 8, and claims dependent thereon, is respectfully requested.

Claims 3-5, 10, 12, 13 and 21 are rejected under 35 U.S.C. §103(a) over *Suntola et al.* (US 4,389,973) in view of *Onoe et al.* (US 6,270,839). Applicant respectfully traverses the rejection on grounds that the references *Suntola et al.* and *Onoe et al.* alone, or in combination, do not teach, suggest, or provide motivation for the invention as claimed.

Applicant submits the references *Suntola et al.* and *Onoe et al.* do not teach, suggest, or provide motivation for an apparatus for vaporizing a solid precursor, comprising a housing having an interior volume and an inlet for receiving a carrier gas, wherein the interior volume is configured to receive a solid chemical precursor, and at least two surfaces contained in the housing and having the solid chemical precursor applied thereto, wherein each of the at least two surfaces comprise a heating element and are spaced to allow flow of the carrier gas therebetween, as recited in claim 1. Withdrawal of the rejection to claim 1, and claims dependent thereon, is respectfully requested.

Applicant also submits the references *Suntola et al.* and *Onoe et al.* do not teach, suggest, or provide motivation for an apparatus for vaporizing a solid precursor, comprising a housing having an interior volume, wherein the interior volume is configured to receive a solid chemical precursor, an inlet for receiving a carrier gas, an outlet for delivering the carrier gas and a vaporized solid precursor, the vaporized solid precursor originating from the solid chemical precursor, a first wall to support the inlet, at least two surfaces contained in the housing and spaced to allow passage of the carrier gas, the least two surfaces having the solid precursor applied thereto, and a heating member contained in each of the at least two surfaces, as recited in claim 8.

Withdrawal of the rejection to claim 8, and claims dependent thereon, is respectfully requested.

Applicant also submits the references *Suntola et al.* and *Onoe et al.* do not teach, suggest, or provide motivation for an apparatus for vaporizing a solid tantalum-containing precursor, comprising a housing having an interior volume configured to receive the solid tantalum-containing precursor, an inlet for receiving a carrier gas, at least two baffles in thermal communication with the solid tantalum-containing precursor, the at least two baffles having the solid tantalum-containing precursor applied thereto and spaced to allow passage of the carrier gas, an outlet for delivering the carrier gas and a vapor originating from the solid tantalum-containing precursor, the outlet operably connected to an atomic layer deposition chamber, and a heating member contained in each of the at least two baffles, as recited in claim 21. Withdrawal of the rejection to claim 21 is respectfully requested.

Claims 16 and 19 are rejected under 35 U.S.C. §103(a) over *Suntola et al.* (US 4,389,973) in view of *Horsky* (US 6,452,338). Applicant respectfully traverses the rejection on grounds that the references *Suntola et al.* and *Horsky* alone, or in combination, do not teach, suggest, or provide motivation for the invention as claimed.

Applicant submits the references *Suntola et al.* and *Horsky* do not teach, suggest, or provide motivation for an apparatus for vaporizing a solid tantalum-containing precursor, comprising a housing comprising an interior volume, an inlet for receiving a carrier gas, and an outlet for delivering the carrier gas and a vaporized solid precursor, wherein the vaporized solid precursor originates from the solid tantalum-containing precursor, at least two surfaces contained in the housing having the solid tantalum-containing precursor applied thereto, wherein the at least two surfaces are configured to heat the solid tantalum-containing precursor and are spaced to allow passage of the carrier gas therebetween, and at least one heating member contained in at least one wall of the housing wherein the outlet is operably connected to a reaction chamber of a deposition chamber, as recited in claim 16. Withdrawal of the rejection to claim 16, and claims dependent thereon, is respectfully requested.

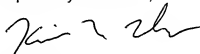
Claim 17 is rejected under 35 U.S.C. §103(a) over *Suntola et al.* in view of *Horsky* as applied to claims 16 and 19 above, and further in view of *Onoe et al.* (US

6,270,839). Applicant respectfully traverses the rejection on grounds that the references *Suntola et al.* and *Horsky* do not teach, suggest, or provide motivation for the invention of claim 16 as discussed above. The reference *Onoe et al.* does not teach or suggest any of the limitations not present in the references *Suntola et al.* and *Horsky*. Applicant submits claim 16 is in allowable form and, as such, claim 17, which depends from claim 16, is in allowable form. Applicant respectfully requests withdrawal of the rejection to claim 17.

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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